Complete Summary

GUIDELINE TITLE

Diagnosis and management of headache in adults. A national clinical guideline.

BIBLIOGRAPHIC SOURCE(S)

Scottish Intercollegiate Guidelines Network (SIGN). Diagnosis and management of headache in adults. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN); 2008 Nov. 81 p. (SIGN publication; no. 107). [274 references]

GUIDELINE STATUS

This is the current release of the guideline.

The guideline will be considered for review in three years. Any updates to the guideline in the interim period will be noted on the Scottish Intercollegiate Guidelines Network (SIGN) Web site.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Headache, including:

- Primary headache (e.g., migraine, tension-type)
- Secondary headache (e.g., due to medication overuse)

Note: This guideline excludes headaches caused by disorders such as trigeminal neuralgia or meningitis.

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Prevention
Risk Assessment
Treatment

CLINICAL SPECIALTY

Dentistry
Family Practice
Internal Medicine
Neurology
Ophthalmology
Pharmacology

INTENDED USERS

Advanced Practice Nurses
Dentists
Nurses
Patients
Pharmacists
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To present evidence-based recommendations for the diagnosis and management of headaches in adults

TARGET POPULATION

Adults with primary and secondary headaches

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Evaluation

1. Symptoms and signs
    - Patient history to classify headache type
    - Clinical examination
    - Neurological examination (with fundoscopy, blood pressure measurement)
    - Referral to specialist or hospital
    - Neck examination
2. Assessment tools
    - Headache diaries

- Assessment questionnaires (headache impact test (HIT/HIT 6), migraine disability assessment (MIDAS), ID migraine)

3. Investigations
    - Neuroimaging (computerized tomography [CT], magnetic resonance imaging [MRI])
    - Lumbar puncture
    - Erythrocyte sedimentation rate, C-reactive protein, and plasma viscosity

Management/Treatment/Prevention

1. Migraine
    - Acute treatment (non-steroidal anti-inflammatory drugs [NSAIDS]), including aspirin, paracetamol, triptans, anti-emetics, ergotamine, caffeine, and other therapies)
    - Pharmacological prophylaxis (beta blockers, antiepileptics, antidepressants)
2. Tension-type headaches
    - Acute treatment (aspirin, paracetamol)
    - Pharmacological prophylaxis (antihypertensives, antiepileptics, antidepressants, other therapies)
3. Trigeminal autonomic cephalalgias
    - Acute treatment (triptans, oxygen, lidocaine)
    - Pharmacological prophylaxis (calcium channel blockers, lithium, ergots, 5-HT antagonists, melatonin, antiepileptics, steroids)
4. Paroxysmal hemicrania and hemicrania continua
    - Pharmacological prophylaxis (indomethacin)
5. Medication overuse headache
    - Acute treatment (withdrawal of overused medication)
    - Pharmacological prophylaxis (topiramate)
6. Pregnancy, contraception, menstruation, and menopause headache relief
7. Stress management
8. Spinal manipulation therapy
9. Acupuncture
10. Complementary therapies (considered but not recommended)

MAJOR OUTCOMES CONSIDERED

- Headache frequency and severity
- Pain control
- Quality of life

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The evidence base for this guideline was synthesised in accordance with Scottish Intercollegiate Guidelines Network (SIGN) methodology. A systematic review of the literature was carried out using search strategies devised by a SIGN information specialist. Databases searched include Medline, Embase, CINAHL, PsycINFO, and the Cochrane Library. For most searches, the year range covered was 2001-2007. Internet searches were carried out on various websites including the US National Guideline Clearinghouse, NLH Guidelines Finder, and Guidelines International Network (G-I-N). The Medline version of the database search strategies for each key question can be found on the SIGN website in the section covering supplementary guideline material (http://www.sign.ac.uk/guidelines/published/support/). The main searches were supplemented by material identified by individual members of the guideline development group.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

1++: High quality meta-analyses, systematic reviews of randomised controlled trials (RCTs), or RCTs with a very low risk of bias

1+: Well-conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias

1-: Meta-analyses, systematic reviews, or RCTs with a high risk of bias

2++: High quality systematic reviews of case control or cohort studies
High quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal

2+: Well-conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal

2-: Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal

3: Non-analytic studies (e.g., case reports, case series)

4: Expert opinion

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Once papers have been selected as potential sources of evidence, the methodology used in each study is assessed to ensure its validity. The result of this assessment will affect the level of evidence allocated to the paper, which will in turn influence the grade of recommendation that it supports.

The methodological assessment is based on a number of key questions that focus on those aspects of the study design that research has shown to have a significant influence on the validity of the results reported and conclusions drawn. These key questions differ between study types, and a range of checklists is used to bring a degree of consistency to the assessment process. Scottish Intercollegiate Guidelines Network (SIGN) has based its assessments on the MERGE (Method for Evaluating Research and Guideline Evidence) checklists developed by the New South Wales Department of Health, which have been subjected to wide consultation and evaluation. These checklists were subjected to detailed evaluation and adaptation to meet SIGN's requirements for a balance between methodological rigour and practicality of use.

The assessment process inevitably involves a degree of subjective judgment. The extent to which a study meets a particular criterion - e.g., an acceptable level of loss to follow up - and, more importantly, the likely impact of this on the reported results from the study will depend on the clinical context. To minimise any potential bias resulting from this, each study must be evaluated independently by at least two group members. Any differences in assessment should then be discussed by the full group. Where differences cannot be resolved, an independent reviewer or an experienced member of SIGN Executive staff will arbitrate to reach an agreed quality assessment.

Evidence Tables

Evidence tables are compiled by SIGN executive staff based on the quality assessments of individual studies provided by guideline development group members. The tables summarise all the validated studies identified from the systematic literature review relating to each key question. They are presented in a standard format to make it easier to compare results across studies, and will present separately the evidence for each outcome measure used in the published studies. These evidence tables form an essential part of the guideline development record and ensure that the basis of the guideline development group's recommendations is transparent.

Additional details can be found in the companion document titled "SIGN 50: A Guideline Developers' Handbook." (Edinburgh [UK]: Scottish Intercollegiate Guidelines Network. [SIGN publication; no. 50]), available from the SIGN Web site.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Synthesising the Evidence

Guideline recommendations are graded to differentiate between those based on strong evidence and those based on weak evidence. This judgment is made on the basis of an (objective) assessment of the design and quality of each study and a (perhaps more subjective) judgment on the consistency, clinical relevance and external validity of the whole body of evidence. The aim is to produce a recommendation that is evidence-based, but which is relevant to the way in which health care is delivered in Scotland and is therefore implementable.

It is important to emphasise that the grading does not relate to the importance of the recommendation, but to the strength of the supporting evidence and, in particular, to the predictive power of the study designs from which that data was obtained. Thus, the grading assigned to a recommendation indicates to users the likelihood that, if that recommendation is implemented, the predicted outcome will be achieved.

Considered Judgment

It is rare for the evidence to show clearly and unambiguously what course of action should be recommended for any given question. Consequently, it is not always clear to those who were not involved in the decision making process how guideline developers were able to arrive at their recommendations, given the evidence they had to base them on. In order to address this problem, SIGN has introduced the concept of considered judgment.

Under the heading of considered judgment, guideline development groups summarise their view of the total body of evidence covered by each evidence table. This summary view is expected to cover the following aspects:

- Quantity, quality, and consistency of evidence
- External validity (generalisability) of studies
- Directness of application to the target population for the guideline
- Any evidence of potential harms associated with implementation of a recommendation
- Clinical impact (i.e., the extent of the impact on the target patient population, and the resources required by NHS in Scotland to treat them in accordance with the recommendation)
- Whether and to what extent, any equality groups may be particularly advantaged or disadvantaged by the recommendations made
- Implementability (i.e., how practical it would be for the NHS in Scotland to implement the recommendation.)

Guideline development groups are provided with a pro forma in which to record the main points from their considered judgment. Once they have considered these issues, the group is asked to summarise their view of the evidence and assign a level of evidence to it, before going on to derive a graded recommendation.

Additional detail about SIGN's process for formulating guideline recommendations is provided in Section 6 of the companion document titled "SIGN 50: A Guideline Developers' Handbook." (Edinburgh [UK]: Scottish Intercollegiate Guidelines Network. [SIGN publication; no. 50], available from the SIGN Web site.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grades of Recommendation

Note: The grade of recommendation relates to the strength of the evidence on which the recommendation is based. It does not reflect the clinical importance of the recommendation.

A: At least one meta-analysis, systematic review, or randomized controlled trial (RCT) rated as 1++ and directly applicable to the target population; *or*

A body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results

B: A body of evidence including studies rated as 2++, directly applicable to the target population, and demonstrating overall consistency of results; *or*

Extrapolated evidence from studies rated as 1++ or 1+

C: A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results; *or*

Extrapolated evidence from studies rated as 2++

D: Evidence level 3 or 4; *or*

Extrapolated evidence from studies rated as 2+

Good Practice Points: Recommended best practice based on the clinical experience of the guideline development group

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

A national open meeting is the main consultative phase of SIGN guideline development, at which the guideline development group presents its draft

recommendations for the first time. The national open meeting for this guideline was held on 5 September 2007 and was attended by 123 representatives of all the key specialties relevant to the guideline. The draft guideline was also available on the SIGN website for a limited period at this stage to allow those unable to attend the meeting to contribute to the development of the guideline.

Peer Review

All SIGN guidelines are reviewed in draft form by independent expert referees, who are asked to comment primarily on the comprehensiveness and accuracy of interpretation of the evidence base supporting the recommendations in the guideline. A number of general practitioners (GPs) and other primary care practitioners also provide comments on the guideline from the primary care perspective, concentrating particularly on the clarity of the recommendations and their assessment of the usefulness of the guideline as a working tool for the primary care team. The draft is also sent to two lay reviewers in order to obtain comments from the patient's perspective.

The comments received from peer reviewers and others are carefully tabulated and discussed with the Chair and with the guideline development group. Each point must be addressed and any changes to the guideline as a result noted or, if no change is made, the reasons for this recorded. As a final quality control check prior to publication, the guideline and the summary of peer reviewers' comments are reviewed by the SIGN Editorial Group for that guideline to ensure that each point has been addressed adequately and that any risk of bias in the guideline development process as a whole has been minimised. Each member of the guideline development group is then asked formally to approve the final guideline for publication.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the Scottish Intercollegiate Guidelines Network (SIGN) and National Guideline Clearinghouse (NGC)*: In addition to these evidence-based recommendations, the guideline development group also identifies points of best clinical practice in the full-text guideline document*.

The grades of recommendations (A–D) and levels of evidence (1++, 1+, 1-, 2++, 2+, 2-, 3, 4) are defined at the end of the "Major Recommendations" field.

Headache disorders are generally classified as either primary or secondary, and these classifications are further divided into specific headache types. Primary headache disorders are not associated with an underlying pathology and include migraine, tension-type, and cluster headache. Secondary headache disorders are attributed to an underlying pathological condition and include any head pain of infectious, neoplastic, vascular, or drug-induced origin.

The individual patient's history is of prime importance in the evaluation of headache. The aim of the history is to classify the headache type(s) and screen for secondary headache using "red flag" features (see "Secondary Headache"

below). An inadequate history is the probable cause of most misdiagnosis of the headache type (see Annex 4 of the original guideline document ["Availability of Companion Documents" field in this summary] for a list of questions to help with taking a patient's headache history from the British Association for the Study of Headache.).

Symptoms and Signs

Primary Headache

Migraine

Distinguishing features of a migraine (Not all have to be present to make the diagnosis):

- Episodic severe headache that causes disability
- Nausea
- Sensitivity to light during headache
- Sensitivity to light between attacks
- Sensitivity to noise
- Typical aura (in 15–33% of patients with migraine)
- Exacerbation by physical activity
- Positive family history of migraine

C - Patients who present with a pattern of recurrent episodes of severe disabling headache associated with nausea and sensitivity to light, and who have a normal neurological examination, should be considered to have migraine.

Tension-Type Headache

C - A diagnosis of tension-type headache should be considered in a patient presenting with bilateral headache that is non-disabling where there is a normal neurological examination.

Trigeminal Autonomic Cephalalgias

D - When a patient presents with frequent, brief, unilateral headaches with autonomic features a trigeminal autonomic cephalalgia should be considered.

D - Patients with a new suspected trigeminal autonomic cephalalgia should be referred for specialist assessment.

Hemicrania Continua

D - When a patient presents with chronic daily headache which is strictly unilateral, hemicrania continua should be considered.

D - Patients with a new suspected hemicrania continua should be referred for specialist assessment.

Secondary Headache

Secondary headache (i.e. headache caused by another condition) should be considered in patients presenting with new onset headache or headache that differs from their usual headache. Observational studies have highlighted the following warning signs or red flags for potential secondary headache which requires further investigation:

Red flag features:

- New onset or change in headache in patients who are aged over 50
- Thunderclap: rapid time to peak headache intensity (seconds to 5 minutes)
- Focal neurological symptoms (e.g., limb weakness, aura <5 min or >1 hr)
- Non-focal neurological symptoms (e.g., Cognitive disturbance)
- Change in headache frequency, characteristics or associated symptoms
- Abnormal neurological examination
- Headache that changes with posture
- Headache wakening the patient up (note well (nb): migraine is the most frequent cause of morning headache)
- Headache precipitated by physical exertion or valsalva manoeuvre (e.g., coughing, laughing, straining)
- Patients with risk factors for cerebral venous sinus thrombosis
- Jaw claudication or visual disturbance
- Neck stiffness
- Fever
- New onset headache in a patient with a history of human immunodeficiency virus (HIV) infection
- New onset headache in a patient with a history of cancer

D - Patients who present with headache and red flag features of potential secondary headache should be referred to an appropriate specialist for further assessment.

D - Patients presenting with headache for the first time or with headache that differs from their usual headache should have a clinical examination, a neurological examination including fundoscopy, and blood pressure measurement.

Thunderclap Headache

D - Patients with a first presentation of thunderclap headache should be referred immediately to hospital for same day specialist assessment.

Cervicogenic Headache

D - Neck examination should be carried out in all patients presenting with headache including assessment of:

- Neck posture
- Range of movement
- Muscle tone
- Muscle tenderness

Raised Intracranial Pressure

D - Patients with headache and features suggestive of raised intracranial pressure should be referred urgently for specialist assessment.

D - Patients with headache and features suggestive of central nervous system (CNS) infection should be referred immediately for same day specialist assessment.

Intracranial Hypotension (Spontaneous or Iatrogenic)

D - Intracranial hypotension should be considered in all patients with headache developing or worsening after assuming an upright posture.

Giant Cell (Temporal) Arteritis

D - Giant cell arteritis should be considered in any patient over the age of 50 presenting with a new headache or change in headache.

Angle Closure Glaucoma

D - Angle closure glaucoma should be considered in a patient with headache associated with a red eye, halos or unilateral visual symptoms.

Assessment Tools

D - Practitioners should consider using headache diaries and appropriate assessment questionnaires to support the diagnosis and management of headache (See Table 2 of the original guideline document for a summary of a number of tools readily available via the internet, such as Headache Impact Test [HIT/HIT 6], Migraine Disability Assessment [MIDAS] and an assessment of their impact.)

Investigations

Neuroimaging

D - Neuroimaging is not indicated in patients with a clear history of migraine, without red flag features for potential secondary headache, and a normal neurological examination.

D - Clinicians requesting neuroimaging should be aware that both magnetic resonance imaging (MRI) and computerised tomography (CT) can identify incidental neurological abnormalities which may result in patient anxiety as well as practical and ethical dilemmas with regard to management.

D - Brain CT should be performed in patients with headache who have unexplained abnormal neurological signs, unless the clinical history suggests MRI is indicated.

Computerised Tomography (CT) and Thunderclap Headache

D - In patients with thunderclap headache, unenhanced CT of the brain should be performed as soon as possible and preferably within 12 hours of onset.

Magnetic Resonance Imaging

D - Brain MRI should be considered in patients with cluster headache, paroxysmal hemicrania or short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing (SUNCT).

D - Brain MRI should be carried out in patients presenting with headache which is precipitated, rather than aggravated, by cough.

Lumbar Puncture in Subarachnoid Haemorrhage

C - Patients with thunderclap headache and a normal CT should have a lumbar puncture.

D - In patients who require a lumbar puncture for thunderclap headache, oxyhaemoglobin and bilirubin should be included in cerebrospinal fluid analysis.

Erythrocyte Sedimentation Rate (ESR), C-Reactive Protein (CRP) and Plasma Viscosity in Giant Cell Arteritis

D - ESR and/or CRP *(but preferably a combination of these diagnostic tests to maximise sensitivity and specificity)* should be measured in patients with suspected giant cell arteritis.

Migraine

Acute Treatment

Non-steroidal Anti-Inflammatory Drugs (including Aspirin) and Paracetamol

A - Aspirin 900 mg is recommended for acute treatment in patients with all severities of migraine.

A - Ibuprofen 400 mg is recommended for acute treatment in patients with migraine.

B - Paracetamol 1,000 mg is recommended as acute treatment for mild to moderate migraine.

Triptans

A - Oral triptans are recommended for acute treatment in patients with all severities of migraine if previous attacks have not been controlled using simple analgesics.

A - Almotriptan 12.5 mg, eletriptan 40-80 mg or rizatriptan 10 mg, are the preferred oral triptans for acute migraine.

B - If a patient does not respond to one triptan an alternative triptan should be offered.

D - Triptans should be taken at, or soon after, the onset of the headache phase of a migraine attack.

C - A combination of sumatriptan 50-100 mg and naproxen sodium 500 mg may be helpful in acute migraine particularly in prolonged attacks which are associated with recurrence.

Anti-Emetics

D - Oral and rectal anti-emetics can be used in patients with acute migraine attacks to reduce symptoms of nausea and vomiting and to promote gastric emptying.

B - A combination of aspirin and metoclopramide can be used for the treatment of patients with acute migraine attacks.

B - Fixed analgesic/anti-emetic combinations can be used for the treatment of patients with acute migraine attacks.

B - Intravenous (IV) metoclopramide can be used in the acute management of patients with migraine.

Ergotamine

A - Ergotamine is not recommended for patients with acute migraine.

Other Therapies

D - Opioid analgesics should not be routinely used for the treatment of patients with acute migraine due to the potential for development of medication overuse headache.

Pharmacological Prophylaxis

Beta Blockers

A - Propranolol 80-240 mg per day is recommended as first line therapy for prophylaxis in patients with migraine.

D - Timolol, atenolol, nadolol and metoprolol can be used as alternatives to propranolol as prophylaxis in patients with migraine.

Antiepileptics

A - In patients with episodic migraine and chronic migraine topiramate 50-200 mg per day is recommended to reduce headache frequency and severity.

A - In patients with episodic migraine sodium valproate 800-1,500 mg per day is recommended to reduce headache frequency and severity.

C - Patients with episodic and chronic migraine can be treated with gabapentin 1,200 -2,400 mg per day to reduce headache frequency.

Antidepressants

B - Selective serotonin reuptake inhibitors (SSRIs) are not recommended in the prophylaxis of migraine.

B - Amitriptyline 25-150 mg per day is recommended for patients requiring prophylaxis of migraine.

B - Venlafaxine 75-150 mg per day is an effective alternative to tricyclic antidepressants for prophylaxis of migraine.

Other Therapies

A - Botulinum toxin A is not recommended for the prophylactic treatment of migraine.

Tension-Type Headache

Acute Treatment

A - Aspirin and paracetamol are recommended for acute treatment in patients with tension-type headache.

Pharmacological Prophylaxis

Antidepressants

A - Tricyclic antidepressants, particularly amitriptyline, 25-150 mg per day, are recommended as the agents of choice where prophylactic treatment is being considered in a patient with chronic tension-type headache.

Other Therapies

B - Botulinum toxin A is not recommended for the preventive treatment of chronic tension-type headache.

Trigeminal Autonomic Cephalalgias

Acute Treatment of Cluster Headache

Triptans

A - Subcutaneous injection of 6 mg sumatriptan is recommended as the first choice treatment for the relief of acute attacks of cluster headache.

A - Nasal sumatriptan or zolmitriptan is recommended for treatment of acute attacks of cluster headache in patients who cannot tolerate subcutaneous sumatriptan.

Pharmacological Prophylaxis

Calcium Channel Blockers

B - Verapamil 240-960 mg is recommended for the prophylaxis of cluster headache.

Treatment of Paroxysmal Hemicrania, Hemicrania Continua, and SUNCT

D - Indomethacin up to 225 mg is recommended for the prophylaxis of paroxysmal hemicrania and hemicrania continua.

Medication Overuse Headache

Definitions and Assessment

D - Medication overuse headache must be excluded in all patients with chronic daily headache *(headache ≥15 days / month for >3 months)*.

D - Clinicians should be aware that patients using any acute or symptomatic headache treatment are at risk of medication overuse headache. Patients with migraine, frequent headache and those using opioid-containing medications or overusing triptans are at most risk.

C - When diagnosing medication overuse headache, psychiatric comorbidity and dependence behaviour should be considered.

C - Patients with medication overuse headache who have psychiatric comorbidity or dependence behaviour should have these conditions treated independently. Referral to a psychiatrist or a clinical psychologist should be considered.

Treatment

C - Patients with medication overuse headache caused by simple analgesics or triptans should be advised to abruptly withdraw the overused medication. In the majority of patients this can be as an outpatient with structured advice.

D - Patients with medication overuse headache caused by opioids and opioid-containing analgesics should be considered for gradual withdrawal of the overused medications.

D - If frequent headache persists after symptomatic medications have been withdrawn, prophylactic agents may be effective and should be considered.

C - In patients with medication overuse headache, topiramate may be considered in order to reduce the total number of headache days.

Pregnancy, Contraception, Menstruation and the Menopause

Oral Contraception

B - Women with migraine with aura should not use a combined oral contraceptive pill.

D - Patients with migraine without aura who are over the age of 35 should not use a combined oral contraceptive pill.

Menstruation

Simple Analgesics

A - Patients with acute menstrual migraine can be treated with mefenamic acid or a combination of aspirin, paracetamol and caffeine.

Triptans

A - Sumatriptan, zolmitriptan, naratriptan and rizatriptan are recommended for the acute treatment of patients with menstrual migraine.

Prophylaxis for Menstrual Migraine

A - Frovatriptan 2.5 mg/day or naratriptan 1 mg twice daily taken two days before day one of the menstrual cycle then for a further four or five days respectively is recommended for the prophylaxis of menstrual migraine.

Menopause

D - Hormone replacement therapy (HRT) can be prescribed to menopausal and perimenopausal women with migraine.

D - If a patient taking HRT experiences worsening migraine, HRT should be considered as a possible cause.

Lifestyle Factors

Stress Management

B - Stress management should be considered as part of a combined therapies programme to help patients reduce the frequency and severity of migraine headaches.

Physical Therapies

Manual Therapy

B - Spinal manipulation therapy should be considered in patients with cervicogenic headache.

Acupuncture

B - Acupuncture should be considered for preventive management in patients with migraine.

Oral Rehabilitation

B - Occlusal adjustment is not recommended for treatment of patients with headache associated with temporomandibular disorders.

Complementary Therapies

Minerals, Vitamins, and Herbs

A - Feverfew is not recommended for preventive treatment of patients with migraine.

B - Intravenous magnesium is not recommended as treatment in patients with acute migraine attack.

Definitions:

Grades of Recommendation

Note: The grade of recommendation relates to the strength of the evidence on which the recommendation is based. It does not reflect the clinical importance of the recommendation.

A: At least one meta-analysis, systematic review, or randomized controlled trial (RCT) rated as 1++ and directly applicable to the target population; *or*

A body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results

B: A body of evidence including studies rated as 2++, directly applicable to the target population, and demonstrating overall consistency of results; *or*

Extrapolated evidence from studies rated as 1++ or 1+

C: A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results; *or*

Extrapolated evidence from studies rated as 2++

D: Evidence level 3 or 4; *or*

Extrapolated evidence from studies rated as 2+

Good Practice Points: Recommended best practice based on the clinical experience of the guideline development group

Levels of Evidence

1++: High quality meta-analyses, systematic reviews of randomised controlled trials (RCTs), or RCTs with a very low risk of bias

1+: Well-conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias

1-: Meta-analyses, systematic reviews, or RCTs with a high risk of bias

2++: High quality systematic reviews of case control or cohort studies
High quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal

2+: Well-conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal

2-: Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal

3: Non-analytic studies (e.g., case reports, case series)

4: Expert opinion

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

- The evidence base regarding signs and symptoms is limited to observational studies and the recommendations are based mainly on case series and expert opinion.
- The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate diagnosis and management of headache in adults

POTENTIAL HARMS

- Incidental abnormalities: Both magnetic resonance imagining (MRI) and computerised tomography (CT) can identify neurological abnormalities

incidental to the patient's presenting complaint and which may result in heightened patient anxiety and clinician uncertainty.
- Side effects associated with non-steroidal anti-inflammatory drugs (NSAIDS), paracetamol, triptans, anti-emetics, beta-blockers, antiepileptics, antidepressants, calcium channel blockers, and hormone replacement therapy.
- Long term exposure to ibuprofen or exposure to high doses in late pregnancy is associated with an increased risk of fetal complications. Where possible, the use of medication in pregnancy should be avoided, particularly in the first trimester.

CONTRAINDICATIONS

CONTRAINDICATIONS

- Triptans are contraindicated in patients with ischaemic heart disease, previous myocardial infarction, coronary vasospasm or uncontrolled or severe hypertension. Triptans should be used with caution in hemiplegic migraine.
- Aspirin is contraindicated during the third trimester of pregnancy.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This guideline is not intended to be construed or to serve as a standard of care. Standards of care are determined on the basis of all clinical data available for an individual case and are subject to change as scientific knowledge and technology advance and patterns of care evolve. Adherence to guideline recommendations will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgement must be made by the appropriate healthcare professional(s) responsible for clinical decisions regarding a particular clinical procedure or treatment plan. This judgement should only be arrived at following discussion of the options with the patient, covering the diagnostic and treatment choices available. It is advised, however, that significant departures from the national guideline or any local guidelines derived from it should be fully documented in the patient's case notes at the time the relevant decision is taken.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Implementation of national clinical guidelines is the responsibility of local National Health Service (NHS) Board and is an essential part of clinical governance. Mechanisms should be in place to review care provided against the guideline recommendations. The reasons for any differences should be assessed and addressed where appropriate. Local arrangements may then be made to implement the national guideline in individual hospitals, units and practices.

Key points for audit and advice from the Scottish Medicines Consortium are included in the original guideline document.

IMPLEMENTATION TOOLS

Audit Criteria/Indicators
Chart Documentation/Checklists/Forms
Quick Reference Guides/Physician Guides

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2008 Nov

GUIDELINE DEVELOPER(S)

Scottish Intercollegiate Guidelines Network - National Government Agency [Non-U.S.]

SOURCE(S) OF FUNDING

Scottish Executive Health Department

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Guideline Development Group: Dr David P B Watson, General Practitioner, Hamilton Medical Group, Aberdeen (*Chair*); Dr Callum Duncan, Consultant Neurologist, Aberdeen Royal Infirmary (*Secretary*); Dr Anne Coker, General Practitioner, Dundee; Ms Arlene Coulson, Principal Clinical Pharmacist, Ninewells Hospital, Dundee; Dr Roger Cull, Honorary Consultant Neurologist, Western General Hospital, Edinburgh; Ms Helen Duncan, Lay representative, Haddington; Dr Murray Fleming, General Practitioner, Clydebank Health Centre; Ms Penelope Fraser, Lead Clinician/Consultant Clinical Psychologist, Ninewells Hospital, Dundee; Mrs Suzie Harrold, Senior Physiotherapist, Glasgow Royal Infirmary; Ms Michele Hilton Boon, Information Officer, SIGN; Dr Gillian Smith, Oral Medicine Consultant, Glasgow Dental Hospital; Ms Ailsa Stein, Programme Manager, SIGN; Dr Lorna Thompson, Programme Manager, SIGN; Dr Alok Tyagi, Consultant Neurologist, Southern General Hospital, Glasgow; Ms Heather Wallace, Chairman, Pain Concern, Haddington

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

All members of the guideline development group made declarations of interest and further details of these are available on request from the SIGN Executive.

GUIDELINE STATUS

This is the current release of the guideline.

The guideline will be considered for review in three years. Any updates to the guideline in the interim period will be noted on the Scottish Intercollegiate Guidelines Network (SIGN) Web site.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Scottish Intercollegiate Guidelines Network (SIGN) Web site.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Quick reference guide: Diagnosis and management of headache in adults. Scottish Intercollegiate Guidelines Network, 2008 Nov. 12 p. Available in Portable Document Format (PDF) from the Scottish Intercollegiate Guidelines Network (SIGN) Web site.

- SIGN 50: A guideline developer's handbook. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network. (SIGN publication; no. 50). Available from the SIGN Web site.
- Appraising the quality of clinical guidelines. The SIGN guide to the AGREE (Appraisal of Guidelines Research & Evaluation) guideline appraisal instrument. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network, 2001. Available from the SIGN Web site.

Also, Annex 4 and 5 in the original guideline document contain headache history questions and a weekly headache diary questionnaire.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI Institute on January 30, 2009. The information was verified by the guideline developer on February 4, 2009.

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Readers with questions regarding guideline content are directed to contact the guideline developer.

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